

**BUSINESS STRATEGY DEVELOPMENT OF PT DAK (DOK AIR KANTUNG) IN
ORDER TO BE A MARKET LEADER IN THE SHIPYARD INDUSTRY**

Ari Wibowo and Moh. Hamsal
School of Business and Management
Institut Teknologi Bandung, Indonesia
ari.wibowo@sbm-itb.ac.id

Abstract - The aim of this final project is to find the root of the problems that occur in PT DAK (Dok Air Kantung) that is about the number of shipyard customers from internal PT Timah as a holding of 80% and the number of shipyard customers of the external which is only 20% of total revenue. The root of the problems that was found is that the quality of work offered by PT DAK is still less than the expectations of customers, customer complaints are not responded quickly, and the lack of marketing employee that can search the external customer. Business strategy of the company must be changed immediately with respect to the shipyard key success factor. Business strategy development method used is the canvas business model, which used nine basic building blocks that must be fixed one by one to obtain the appropriate business strategy with the root problems that occur.

Keywords: Shipyard, PT DAK, Canvas Business Model, Human Resources.

1. Introduction

PT DAK (Dok Air Kantung) is a subsidiary of PT Timah (Persero) Tbk, which located on Air Kantung Sungailiat, Bangka Belitung islands province. The company was founded in 1996 with a joint venture with the Kodja Bahari shipyard, with the aim to provide overhaul services, shipbuilding, and transportation. One of the company's excellence in performing these activities is a strategic location in the north part of Bangka island dealing with the South China Sea, namely in the international shipping lane Straits of Malacca. To increase the capacity of existing production, then PT DAK in 2007 acquired PT. Dwi Jasa Mitra located in Selindung area, Pangkalpinang, Bangka Belitung Islands Province on the area of 20 acres, located in a strategic position that is the path to lean ship unloading at port Pangkalbalam, Pangkalpinang.

Number of employees of PT DAK in 2012 entirely as many as 103 people, of which 88 permanent employees and the remaining status is not permanent and contract status. This amount does not include the wholesale contract employees that are prepared to projects work. Currently PT DAK has adequate, however uncompleted equipment to support shipyard operation. Owned pier is divided into two (2) places which are the shipyard in Air Kantung Sungailiat used to repair small ships and shipyard in Selindung Pangkalpinang used for repair and manufacture of large ships. For each infrastructure at the shipyard include office buildings, construction workshop, welding workshop, lathe workshop, electrical workshop, slipway and graving dock. PT DAK has the financial resources that are fully supported by PT Timah (Persero) Tbk, the holding company, so the cash flow of the company is guaranteed smoothly so that profits derived from the operation of the company is a major source of funds to grow and thrive.

PT DAK has many resources supplier to supply goods for ship repairs that are fast moving. The suppliers have each specialization in providing the company's material needs such as mechanical goods, electrical goods, tools, ship navigation and others. For items that are slow moving items are not made provision in the warehouse, this is done because it will hinder the company cashflow and make the warehouse full. Usually the goods and services will be purchased after booking from customers. PT DAK currently have the customer resources of the internal PT Timah (Persero) Tbk, which has pretty much numbered fleet, each ship has already set schedule for annual repairs done routinely. It is the obligation of every ship that entered the class in accordance with the standard of Biro Klasifikasi Indonesia (BKI), docking and repairs must be done to check the feasibility of the ship, especially pontoon problem which is boat safety requirements. PT DAK was well aware that the company will not be able to survive if it did not heed its stakeholders, therefore at this time the company continues to establish good relations with local communities and local government companies. Good rapport was created through a partnership program of CSR (Corporate Social Responsibility) under the auspices of PT Timah (Persero) Tbk which is realized with the aid in the form of construction of public facilities and capital assistance to small businesses in the surrounding communities. In addition, PT DAK also build partnerships with experienced shipping business performer as PT ASDP (Persero).

In the province of Bangka Belitung Islands, PT DAK deal with external business challenges, namely the existence of the competitor company that offers employment services prices that are cheaper. In addition, government regulation of Law no. 17 Year 2008 on the voyage, make opportunities opened for new companies to enter into similar businesses financed by foreigners so that it becomes a threat to the survival of the company. On the internal side of the company is the quality of the work services produced is less than expectations, this was due to the work quality control in the shipyard still less stringent. Lack of specialized personnel to handle the quality of work is being the main cause. In addition, post-purchase complaints handling is still relatively slow, response to customer needs should be a particular concern. In addition, the project work is still largely done by business partners, it is because of the limited number of its human resources.

In general, customers of PT DAK are orders of PT Timah (Persero) Tbk, which has a lot of fleet production and transport vessels. Looking at the number of ships owned by PT Timah, then the portion of the internal order of PT Timah is more than 80% of the total orders that are done by PT DAK, the remainder is less than 20% are the external orders. With such conditions, the course will make PT DAK should immediately change the portion of orders to be 66% the internal order – 34% the external order. The problems occurred are the quality of the work is still not good, a lot of customer complaints that are not quickly responded, and the marketing employee that does not exist, so the number of external customers slightly.

2. Business Process

To solve the problems faced by PT DAK, the Conceptual Framework is needed in order to have alternative business solutions that are appropriate for the company. The first step is to determine the formulation of problems that occur in the company by looking at the external and internal challenges faced by the company. The second step is to determine the company's business situation analysis. The analysis is divided into two (2) parts which are external analysis and internal analysis. For external analysis is using Pestel analysis, Porter's Five Forces analysis, and SWOT analysis especially Opportunity and Threat. As for the internal analysis, is using the resources capabilities, value chain analysis and SWOT analysis especially Strength and Weakness. After conducting the company's business situation analysis, it can be seen the roots of the problems that occur in the company using the Fish Bone Diagram depicting the main cause of the problems that occur and supporting cause. In addition, the key success factors of the business strategy should be sought to obtain business solutions that should be taken. The key success factors should all be owned by the company to get the best solutions to problems that have to be taken. The next step is to determine the proposed business solutions using tools Canvas Business Model. Proposed business solution that

has been chosen must be implemented using ganchart of time that must be taken for the completion of each step as well as a measure of success that must be met by any proposed best business solutions.

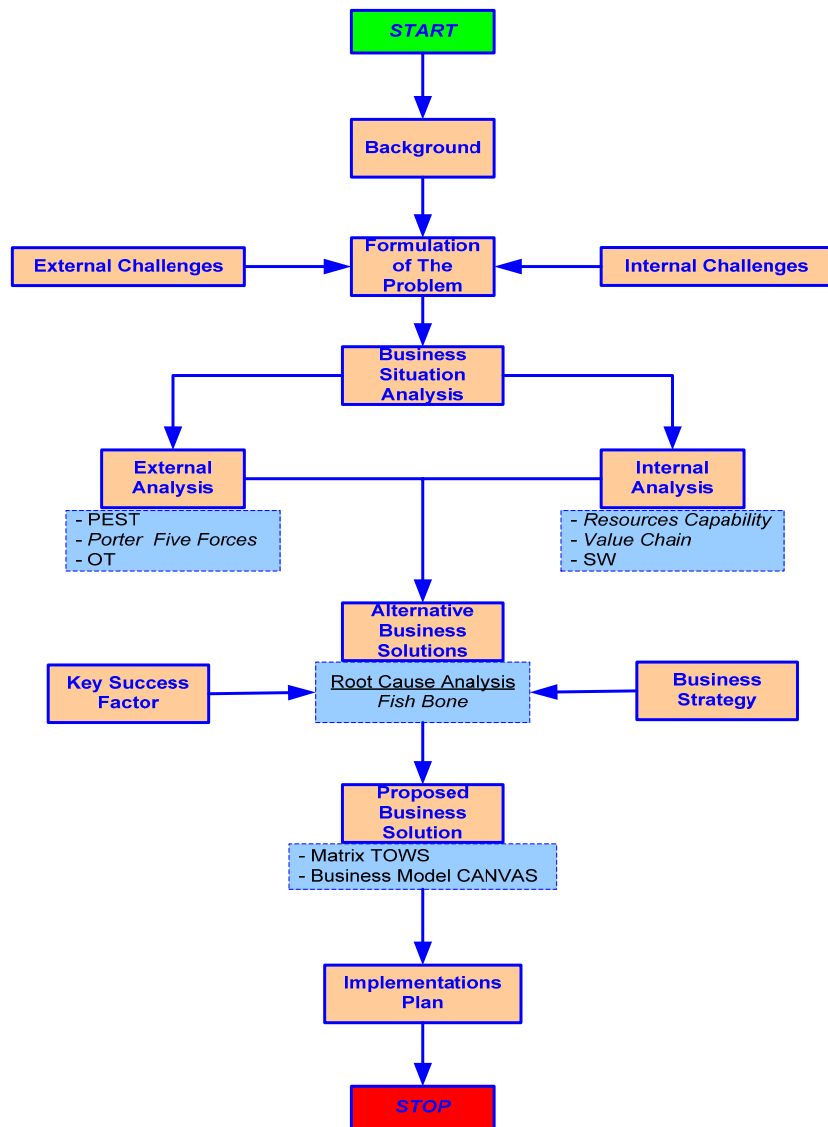


Figure Conceptual Framework

External Business Situation Analysis

A. PEST Analysis

Ships import policy which is set by the Indonesian Government through the Indonesian Chamber of Commerce (KADIN) is a serious threat to the national shipyard industry. However, the Ministry of Industry still provide an opportunity for the national shipyard industry to produce domestic ships and freeing the duty costs of raw materials that can not be produced domestically. This policy makes the national shipyard industry still has a great opportunity and is ready to compete with imported products. In addition, the government creates economic liberalization between countries which will have an enormous impact to the national shipyard industry that is the threat of overseas product ships, especially from China which have lower-priced. The improvement of Indonesian economic level which is marked by inflation decline and the increasing of purchasing power make the shipyard business is still quite promising. However, to anticipate customer demand that getting complex then shipyard companies should always follow the shipping technology development that increasingly sophisticated.

B. Porter's Five Forces Model

The essence of strategy formulation is to overcome the competition in the struggling of market share. Competitive conditions in an industry based on Porter's Five Forces rely on the five (5) basic power that influence to determine the final profit potential in an industry.

- Rivalry Among Existing Firms

The number of shipyard companies existing in Bangka Belitung Islands just a little, this is because the shipyard business should have a special expertise and reliable technical competence in the field of shipping. For the western part of Indonesia (including Jakarta and Sumatra), shipyard companies that have the same class of large capacity and the same facilities amount of 30 companies.

- Potential Threats of New Entrants

With the Presidential Instruction No. 5 of 2005 on optimizing the implementation of empowerment policies of national shipping industry, ie ships transportation between ports required Indonesian flag, this means encouraging the growth of new vessels construction. In addition to the enactment of Law No. 17 of 2008, in accordance with Article 29, paragraph 2 that Indonesian citizen entrepreneurs or business entity can make cooperation with foreign shipping companies or foreign legal entities in forming a joint venture. This legislation will encourage the growth of joint venture shipyard industry with a foreign investor.

- Threat of Substitute Products

Shipyard business is a specific business, namely shipbuilding services that are customized according to customer demand, referring to the standards set forth by the Indonesian Classification Bureau, and this work is usually done with the utmost care and need highly precision. So now, nothing can replace the services of this shipyard.

- Bargaining Power of Buyers

Some consideration will be made by the shipyards consumer include the location of the shipyard and the availability of facilities or support means that are complete. Customers of PT DAK are currently dominated by the internal order of PT Timah which is equal to 80%, while from external parties only 20%. The management targets the revenue projections should increase by 10% from the previous year's revenue. Then, at the end of 2014 the company must earn revenues of approximately USD 167.8 billion, with the composition of the internal consumer's income remains Rp 111.2 billion and the revenue from external PT Timah should get an income of Rp 56.6 billion. So with this condition will change the portion of the consumers numbers that previously 80% of internal customers and 20% of external customers to 64% of internal customers and 34% of external customers by the end of 2014.

- Bargaining Power of Suppliers

The process of vessels manufacture or repair at PT DAK's shipyard generally uses raw materials of steel plate supplied by supplier from Jakarta. Metal prices are highly fluctuating following the global market, but it is also influenced by world oil prices. Therefore these steel plate suppliers do not want a long-term raw material supply contracts with PT DAK. In addition, ship fittings include mechanical equipment, electrical and navigation are all not the product of PT DAK. The equipment is often indent to bring in from abroad by certain suppliers. This condition often makes PT DAK following the offering price from the supplier with reason the ordered equipments were hard to get.

C. Other External Analysis (Opportunities and Threats)

- The Indonesian government has issued a policy with the enactment of cabotage principle, in accordance with Presidential Instruction No. 5 of 2005 on the national shipping industry that the government imported goods are required to use the red and white flag ships.
- Shipping industry in Indonesia has considerable market potential, seen by the increasing number of national fleets from year to year.
- There is still quite large shipyard capacity needed to meet demand for the improvement of national ships.

- The occurrence of Air Kantung River estuary flow sedimentation, which is the sea access road to Air Kantung docks.
- Demands (design requirements and manufacturing process) that are requested by an employer / vessel owner in the future will be higher.
- The growth of information technology and computerization that rapidly increased will bring impact on the speed and accuracy in the design and analysis on the world shipyard industry.
- The emergence of new competitors and the opening of foreign investment to enter the national shipyard business.

Internal Business Situation Analysis

A. Resources and Capabilities

- Tangible resources

PT DAK has a good financial condition with good funding source and the shipyard is located in a very strategic position in the shipping lanes. The shipyard has an area of 20 hectares in Selindung Pangkalpinang and an area of 10 hectares in Air Kantung Sungailiat. At each location of the shipyard is equipped with office buildings, welding workshop, construction workshop, electrical workshop, graving dock for dry dock with a capacity of 3,000 DWT and slip way for ship repair and launch with a capacity of 4,000 DWT. Heavy equipment facilities for each shipyard location contained Forklift with 15 tons capacity and 5 tons capacity, carry crane with 40 tons capacity and 5 tons capacity.

- Intangible resources

Technology that is applied by PT DAK in ship repair work is still conventional for a lot of equipment that has not been rejuvenated, but culture of discipline applied by the company in day-to-day operations to make the reputation of a brand that has been built by PT DAK is known good.

- Human Resources

Number of PT DAK's employees in 2012 was as much as 103 people with the composition of 88 people as permanent employees and 15 as non-permanent employees. For the project work, there were 300 people that were worked as outsourcing employee. The skills of field employees, on average only have basic skills.

B. Other Internal Analysis (Strengths and Weaknesses)

- PT DAK already has business experience (track record) in the shipping industry both in the construction / shipbuilding (new buildings) or repair / refits the vessel, with more than 16 years of experience.
- Having enough business partner connections that can facilitate the development and operational activities of the shipyard.
- Strategic business location on track of busy enough shipping traffic between Java, Sumatra and Kalimantan.
- Financial ability that good enough, so it will not be difficult to get the cash flow.
- Components / equipment / systems installed on a ship (the new building) is still a lot of foreign products (imports).
- Limited capacity of the shipyard facilities and infrastructure, such as electricity is still supplied by PT Timah and still utilizes the services of the Balai Karya PT Timah.
- Human resources competency in the field of marketing and shipping industry have been inadequate.
- Lack of research activities for the development of the shipping industry.

C. Value Chain Analysis

1. Primary Activities

- Inbound Logistics

The system used by PT DAK in the procurement of raw materials is based on work orders, there aren't a lot stock of raw materials because it would interfere with cashflow if doing a lot of raw material storage.

- Operation

The layout of the building in PT DAK shipyard is quite representative with the appropriate path to the shipbuilding process. But the productivity of existing support equipment is still inadequate because not all equipments are rejuvenated. So the quality of the work produced can not be maximal. Coupled with quality control is still not in line with expectations which often lead to repeated work.

- Outbound Logistic

Ship distribution to customers is never constrained for Selindung shipyard, while for Air Kantung shipyard still depend on Air Kantung estuary that always encounters siltation.

- Marketing and Sales

Market research by PT DAK is never done, and this is because labor personnel specifically assigned as a marketing and sales employee have not been available despite the existing organizational structure.

- Service

The customer service provided by PT DAK is not maximized. Every complaint on the not perfectly work completion (especially of internal PT Timah) is always too late to make improvements again.

2. Support Activities

- Firm Infrastructure

PT DAK ability to identify market opportunities and threats from the potential environment is pretty good, strategic planning to achieve company goals already done.

- Human Resources Management

Management of human resources implemented in the company still has not effective in recruiting or selecting employees, training and a promotion is also rarely done because the existing organizational structure is limited.

- Technology Development

PT DAK does not have a research and development department that is specific to the design, because currently the company does not have any naval architech labor which specializes in ship design.

- Procurement

The procurement of goods or services that are applied at PT DAK still using manual, process control and purchase of goods database are not yet integrated.

D. Root Cause Analysis

Tools that are used to find the root of the problem is fish bone methode, by sorting the main cause (primary) of the problems occurred followed by other causes (secondary). The main problem that occurs in PT DAK is the number of external customers was very little, although the price offered was very competitive, but the customer still does not increase in number.

- Man (Is The Most Dominant Issues)

Human resources owned by PT DAK today still rely on the outsourcing primarily for field labor. Employees who have positions and staff only are permanent employees. This would constitute a serious threat because PT DAK is a company engaged in the field of services with quality of the work is already standardized. In addition, the employee's skills are still lacking in terms of ship design due to technical training is rare.

- Machine

Support equipment owned by PT DAK now is still not complete to meet the needs of the shipyard. Investment in equipment, especially equipment such as cranes require considerable cost. While other infrastructure such as dry dock is still far from expectations due to it still done manually. In addition, electricity supplies dependency and workshop owned by PT Timah as a holding company.

- Material

Material supplies used for the needs of the shipyard is still depend on the order, even though PT DAK already have a supplier who always provide the raw material plate, but metal prices fluctuate so that partners do not want to provide consignment system. Besides that, spare parts availability is always constrained by slow delivery process because it still has dependency to a single supplier.

- Method

For every project ordered by PT Timah (internal project) is always accepted regardless of the existing work load capacity, so that work completion delays is always happening. In addition, the lack of work supervision result in work outcomes can not be perfect because the quality control is not running as it should.

Key Success Factor that must be owned by PT DAK as a shipyard company, among others:

1. Shipyard position must be strategic which is located in the path of international cruise ships and domestic vessels.
2. The quality of the services should good, so that customer satisfaction can be achieved and will certainly repeat orders.
3. Financial support to develop the shipyard.
4. Speed in completing repair / shipbuilding work in time accordance with the request.
5. The price offered must be competitive and able to compete.
6. Reliable sales employee to find new customers.
7. Reliable human resources services to create a perfect work service.

3. Business Solutions

To get a good business solution in accordance with the underlying existing issues, it would require some alternative solutions to existing problems. Tools approach that will be used are TOWS Matrix and Canvas model diagram. The first step is to examine the mission and goals of the company before generating and evaluating alternative strategies. If the company's mission statement is too narrow or broad, it will generate some problems in performance, an unclear direction will lead to conflict between corporate divisions. After checking, the vision and mission of PT DAK company was in line with expectations and can be used to achieve the goal of improving corporate earnings and can compete with other shipyard companies. Reform must be done from internal first, then proceed with steps to compete with the external

Solving business problems that occur using the TOWS Matrix by displaying weakness and strength factors (internal company) compared with the opportunities and threats (external company). After the identification of each factor were made, match the alternative solution that will be taken to solve the existing problems. This method leads to brainstorming to create growth and reduction strategies.

Alternative solutions using TOWS matrix for PT DAK is as follows:

- a. Strengths and Opportunities Strategy (S-O)
 - To increase production capacity, it is necessary to rejuvenate the supporting equipment that has been old, considering the company's financial condition is sufficient to make an investment.
 - Cooperate with other shipyard companies to get other projects.
 - Conduct recruitment of professional and experienced marketing employees to find new customers in the area of Western Indonesia which is still potential.
- b. Strength and Threats Strategy (S-T)
 - To check the depth of the estuary and the estuary excavation regularly because tide is one of the factors accelerating siltation in the estuary edge.
 - Make software investments in accordance with the development of technology to support the efficiency and good accuracy of the work.
- c. Weaknesses and Opportunities Strategy (W-O)
 - Doing business partner selection that will supply good quality of goods and easy, for example, the beauty contest to get a reliable partner.
 - Develop shipping research to anticipate customer demand for more complex query specification.

- Conduct technical and specifications training to improve the skills of each employee.
- d. Weaknesses and Threats Strategy (W-T)
 - Establish competency cooperation with the information technology based company.
 - Conduct a thorough evaluation of the job routinely to satisfy customers in order to remain loyal.

Other tools used to create solutions to business problems that occur are using Canvas Business Model. This business model is a description of how enterprise organizations are created, how to run it and capture what has become the value of the company.

Steps to take by PT DAK based on Canvas Business Model:

1. Customer Segment

- Recruit sales employee to identify the characteristics and needs of the market.
- Establish market segmentation.
- Set a target market that will be entered.
- Establish the company's position in the market

2. Value Propositions

- Price is changed to Competitive / Leader by doing efficiency in all areas and offer procurement system through tenders.
- Features are increased to Original / customized by doing creative and continuously innovation.
- Quality is improved to excellent / average by adding more quality control personnel to supervise the work process strictly.
- Support is increased to Comprehensive / standard by handling customer complaints quickly.
- Availability is increased to selective / universal with the new marketing employee that will increase the number of external customers.
- Reputation is maintained Respected / functional, particularly reputation in the eyes of external customers, so the external customer's confidence level to the company's is high.

3. Channels

Marketing personnel should often explain the product knowledge to customers, evaluate the company's value from the customer's suggestion, and assist customers in handling after purchase, so that customer loyalty can be established and can add new customers.

4. Revenue Streams

- Providing a qualified ship repair services.
- Provide convenience to customers for access to the shipyard.
- Rent heavy equipment, tugboat to assist in the ship withdrawal.
- Eliminating intermediaries / brokers on trading operations to reduce costs.

5. Customer Relationships

Actions to be performed on PT DAK is to establish good relations with its customers, by making satisfactory after sales service, customer complaints can be submitted via e-mail so they can get a quick response on handling, making customer gathering events, conduct workshops and seminars to discuss issues faced by the customers.

6. Key Activities

Companies should increase the number of personnel for production planning, and conduct technical training to increase employee skills. In addition, it should promote heavily in print and electronic media so that the network will expand.

7. Key Resources

Adding the number of employees who have special competence, such as marketing and shipping techniques.

8. Key Partnerships

Strategic alliances with ship navigation equipment companies must be maintained, while continuous evaluation and labor used for the core business should be permanent employees in order to ensure the quality of the work.

9. Cost structure

Changing the variable cost component by doing efficiency of procurement is done by conducting a tender to get a low price with best quality. In addition, changing the economical scale is done by

doing mass production of ship component goods that fast moving such as the manufacture of propeller shafts, steering leaves. In this way the price of these goods becomes cheaper, so the total cost becomes cheaper.

4. Implementation Plan and Resource Allocation

In applying the implementation plan should be determining the vision and mission of the company and the value of the company that used to support the company's success. Values used by PT DAK are honest, competent, transparent, and innovative. The company's value should be able to be implemented all personally and company to win the competition in the shipyard industry.

In order to implement the business strategies that will be set up by the end of 2014, then functional strategies used for implementation of the plan were selected, which are:

- a. Marketing strategy
 - Conduct sales expansion into new customer groups in the Western Indonesian region.
 - Increasing penetration in the existing consumer market segment.
 - Maintaining existing markets by improving quality.
- b. Financial strategy
 - Conduct short-term loans with low interest from PT Timah as a shareholder.
- c. Research & Development Strategy
 - Emphasize Research & Development by providing additional funding for shipping technology research needs.
- d. Operations strategy
 - Cooperate with experienced company to get new technologies support.
 - Increasing operating capacity by expanding the area of Selindung shipyard.
 - Cooperate with suppliers through a rigorous tender that has rapid goods supply credibility, demand suitability quality, and competitive pricing.
 - Perform supporting equipment rejuvenation and make new workshop to support shipyard operations.
- e. Human Resource Strategy
 - Conduct recruitment of labors that has working experience in marketing, production planning and quality control.
 - Conduct technical training and performance assessment routinely.
- f. Information Systems Strategy
 - Perform website creation that displays the company's condition and shipping services advertisement.
 - Make improvements of procurement system by using the SAP system that is integrated into a data base so that all the production costs can be controlled.

Based on existing cost savings calculation, then proposed functional principal strategy is worth to be considered because it would generate an additional profit of Rp. 2.115 billion for the company.

Reference

- Anderson, D & A Anderson, LA 2010, *Beyond Change Management: How to Achieve Breakthrough Result Trough Conscious Change Leadership*, 2nd Edition, Pfeiffer: A Wiley Imprint, San Fransisco.
- Finkelstein and Lawton, 2007, *Breakout Strategy Concept*, Imperial College Alumni Association, Singapore.
- Grant, M, R, & Jordan, J, 2012, *Foundations of Strategy*, John Wiley & Sons, Ltd.
- Indonesian National Shipowners Association (INSA).
- Indonesian Shipbuilding and Offshore Association (IPERINDO).

- Instruksi Presiden Republik Indonesia No. 5 Tahun 2005 tentang pemberdayaan industri pelayaran nasional.
- Kementerian Perhubungan Republik Indonesia, Direktorat Jenderal Perhubungan Laut.
- Osterwalder, A & Yves Pigneur, 2010, *Business Model Generation*, John Wiley & Sons, Inc., Hoboken, New Jersey.
- Porter, M,E, 1990, *Competitive Advantage of Nations*, New York, Free Press
- Tregoe B.B & J.W. Zimmerman, 1981, *The New Strategic Manager*, *Business May-June*: 19
- Undang Undang Republik Indonesia No. 17 Tahun 2008 tentang pelayaran.
- Wheelen, T.L & Hunger, JD, 2008, *Strategic Management and Business Policy*, 11th Edition, New Jersey: Pearson International Edition.
- Wibisono, D, 2006, *Manajemen Kinerja: Konsep, Desain, dan Teknik Meningkatkan Daya Saing Perusahaan*, Jakarta: Penerbit Erlangga.
- <http://www.beritasatu.com/bisnis/73934-6-perusahaan-galangan-kapal-investasi-rp1-5-triliun.html>, Accessed on May 2, 2013
- <http://twicsy.com/i/ZYsWYb>, Accessed on May 6, 2013